What's New from the DAAC Alliance

For information about the member centers of the Distributed Active Archive Center (DAAC) Alliance and how to receive their data products and services, see the DAAC Alliance Web site at http://nasadaacs.eos.nasa.gov.

ASF DAAC

Alaska SAR Facility

http://www.asf.alaska.edu

Synthetic Aperture Radar (SAR) Products and Polar Regions

RADARSAT-1 SAR Mosaic of Antarctica

This first complete, high-resolution SAR map of Antarctica is a remarkable snapshot of the continent during Fall 1997. The mosaic was produced by the NASA Pathfinder Project RADARSAT-1 Antarctic Mapping Program (RAMP). Canadian partners included the Canadian Space Agency (CSA), Canadian Centre for Remote Sensing (CCRS), and RADARSAT International (RSI). U.S. partners included Ohio State University, NASA's ASF and JPL, and the Vexcel Corporation. Additional support was provided by NASA's GSFC, the Environmental Research Institute of Michigan (ERIM), and the National Imagery and Mapping Agency (NIMA). This product is available in 250-m resolution on CD-ROM, 125-m resolution via FTP, and newly released 25-m resolution on DVD.

EDC DAAC

Earth Resources Observation Systems (EROS) Data Center

http://edcdaac.usgs.gov

Land Processes

Data

EarthSat Geocover Orthorectified Landsat TM Imagery

The imagery was compiled through NASA's Commercial Remote Sensing Program, a cooperative effort between NASA and the commercial remote sensing community, to provide quality-screened, high-resolution satellite images with global coverage over Earth's land masses. The resulting data set contains orthorectified thematic mapper (TM) data from the Landsat 4 and 5 satellites. Only the Landsat images that most closely met a specific set of criteria, including acquisition date, cloud percentage, data quality parameters, and best available phenology, were considered for the collection. Approximately 8,500 images are currently selected for insertion into the archive upon release. CD-ROMs cost $60 each (one granule per CD), excluding shipping and handling. Via FTP, the cost is $50 per granule, excluding handling. The handling fees are $5 per order, and an additional $20 per international order. Additional information can be found at http://edcdaac.usgs.gov/nsdp/earthsat_overview.html.

ASTER and MODIS

EDC continues to make new products available from the Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) and Moderate Resolution Imaging Spectroradiometer (MODIS) sensors. For ASTER products, see http://edcdaac.usgs.gov/aster/asterdataprod.html; for MODIS, see http://edcdaac.usgs.gov/modis/dataprod.html.

Tools

MODIS Reprojection Tool (MRT)

The EDC DAAC has sponsored the South Dakota School of Mines & Technology in development of the MODIS Reprojection Tool (MRT). This tool has been designed to reproject 2-D gridded Level 3 MODIS products, originally produced in the Integerized Sinusoidal (ISIN) projection. The initial version of this software enables users to read data files in Heirarchical Data Format for EOS (HDF-EOS) format, offers spectral and spatial subsetting, performs geographic transformation to a different coordinate system/ cartographic projection, writes the output to file formats other than HDF-EOS, and is executable on UNIX (Sun, SGI), Windows (9x, NT), and Linux systems. The MRT is available at http://edc.usgs.gov/programs/sddm/modisdist/.

GHRC

Global Hydrology Resource Center

http://ghrc.msfc.nasa.gov/

Global Hydrology

Data

LIS and ODT Data Products

The GHRC offers four new climatologies based on data from the spaceborne Lightning Instrument Sensor (LIS) and the Orbital Transient Detector (OTD).

- ➡ LIS/OTD 0.5-Degree High-Resolution Full Climatology
- ➡ LIS/OTD 2.5-Degree Low-Resolution Annual Climatology
- ➡ LIS/OTD 2.5-Degree Low-Resolution Diurnal Climatology
- ➡ LIS/OTD 2.5 Degree Low-Resolution Full Climatology

All data are available in HDF and can be ordered directly from the GHRC via HyDRO at http://ghrc.msfc.nasa.gov.

CAMEX-4 Data

The Fourth Convection and Moisture Experiment (CAMEX-4) was conducted from the Naval Air Station Jacksonville, Florida, from August 15 through September 24, 2001. Various instruments from ground-, aircraft-, and space-based platforms provided data used to study tropical storms, hurricanes, and various synoptic-scale phenomena. The data are to be archived at the GHRC. Some preliminary data have been obtained and more are expected in the next few months.

For information about the experiment, participants, and science, go to http://camex.msfc.nasa.gov. The site provides instrument descriptions, along with quicklook images, data, and links to those involved in the experiment.

Tools

HEW2000

This HDF-EOS Web-based subsetter can extract a subset of any grid or swath data field in HDF-EOS format. Subsetting can be performed on the following:

- Latitude and longitude (rectangle areas)
- Date and time span (swath data)
- Data set parameter (e.g., instrument or sensor)

HEW2000 is also capable of subsampling by extracting every *n*th point of data. As a standalone subsetter, HEW2000 employs a user-friendly Web-based front end to gather the user's subsetting criteria, and then submits the subsetting job to the batch queue. The subsetter engine (back end) can also be used separately by substituting a site-specific front end in place of HEW's Web-based interface.

GSFC DAAC

Goddard Space Flight Center

http://daac.gsfc.nasa.gov

Upper Atmosphere, Atmospheric Dynamics, Global Precipitation, Global Biosphere, Ocean Color

Data

TRMM Satellite Operating Altitude Change

The National Space Development Agency (NASDA) of Japan and NASA management approved a Tropical Rainfall Measuring Mission (TRMM) Project decision to change TRMM's average operating altitude from 350 km to 403 km. This change will significantly extend the TRMM mission lifetime. The maneuver began August 7, 2001, and the final main satellite maneuver was completed August 22, 2001, bringing TRMM to the targeted final operating altitude of about 402.5 km. After the fine-adjust maneuver on August 24, 2001, the average operating altitude became 403 km. About a month after the TRMM operating altitude change, the Visible and Infrared Scanner (VIRS) and TRMM Microwave Imager (TMI) instrument teams approved the release of data products 1A01, 1A11, 1B01, 1B11, 2A12, and 3A11. Data are available via the TRMM data search-and-order system at http://lake.nascom.nasa.gov/data/dataset/TRMM/index.html. Some data gaps exist from August 13 to 17, when the onboard instruments were turned off because of a problem related to satellite attitude control. Updated documentation (e.g., new swath widths, resolutions) will be provided when the information is available. Note that post-altitude change filenames contain "5A" in the product version part of the name.

MODIS Data

Significant improvements have been made in the majority of previously released MODIS "Beta" (Version 001) data products. As a result of these improvements, the MODIS Provisional Products (Version 003) are now available. More information can be found at http://daac.gsfc.nasa.gov/CAMPAIGN_DOCS/MODIS/index.shtml.

MODIS Tools and Services

Several new functionalities have been added to the GSFC search-and-order interface, known as WHOM. For the MODIS portion, see http://acdisx.gsfc.nasa.gov/data/dataset/MODIS.

➡ Attribute filtering
- Users can see spatial coverage by filtering granules by attributes of quality, cloud coverage percentage, day/night.
- Currently, filtering by Day/Night flag only has been implemented.

➡ Ocean Level 3 parameter "subsetting"
- Users can search and order granules containing only those parameters they need instead of ordering all parameters for a given Ocean multigranule ESDT.
- Currently implemented for mapped products only.

➡ On-demand channel/band subsetting
- Users can request only the parameters or bands they need from all parameter/bands bundled together in a single granule.
- Currently implemented for Level 1B (1 km) only.

JPL DAAC

Jet Propulsion Laboratory

http://podaac.jpl.nasa.gov

Physical Oceanography

Advanced Very High Resolution Radiometer (AVHRR) Orbital 9-km MCSST Level 2 Data (NAVOCEANO)

Sea surface temperature (SST) data produced by the Naval Oceanographic Office (NAVOCEANO) from NOAA-n AVHRR at a near-real-time rate are now available from PO.DAAC. This product uses the multichannel sea surface temperature (MCSST) algorithm, but with a greater number of retrievals than previous MCSST data sets. Both the accuracy and retrieval rate in Pathfinder SST are higher than in this MCSST product, but this product is available sooner. The 9-km orbital files, received with only a few hours lag time, allow the data to be used for near-real-time applications. Temporal coverage for the PO.DAAC product began August 29, 2001, and will be ongoing. Level 2 (orbital, ungridded) data are now available in a packed binary format via FTP, with future plans for Level 3 (gridded) data. Read software is also available.

BYU Daily Browse Images of QuikSCAT Sigma-0 Measurements (Brigham Young University)

The SeaWinds on QuikSCAT scatterometer provides normalized radar cross-section (sigma-0) measurements of the Earth's surface. While originally designed for wind observation, scatterometers have also proven useful in a variety of land and ice studies. This product consists of browse images made directly from the sigma-0s to aid in the selection of regions and time periods for study. For each day (July 19, 1999 to present), this dataset has one sigma-0 browse image for each combination of

- Three regions: global, north, and south
- Two polarizations: horizontal and vertical
- Three image types: average, standard deviation, and count

QuikSCAT measures the sigma-0s at both vertical and horizontal polarizations. Since it is undesirable to combine measurements from different polarizations, measurements for each are kept separate. Data are available on CD-ROM and on 8-mm EXABYTE tape in UNIX TAR, and via FTP to podaac.jpl.nasa.gov.

LaRC DAAC

Langley Research Center

http://eosweb.larc.nasa.gov

Radiation Budget, Clouds, Aerosols, and Tropospheric Chemistry

Data

Terra Data

The Atmospheric Sciences Data Center supports three projects from the EOS Terra mission: the Multi-angle Imaging SpectroRadiometer (MISR), the Measurements Of Pollution In The Troposphere (MOPITT), and the Clouds and Earth's Radiant Energy System (CERES).

CERES Single Scanner Footprint TOA/Surface Fluxes and Clouds (SSF) data from Terra contain an hour of instantaneous CERES data for a single scanner instrument.

AirMISR Data

AirMISR is the airborne instrument similar to that of the satellite-borne MISR instrument. The Level 1 radiometric and geometric products are available for three validation campaigns: Monterey, California; Lunar Lake, Nevada; and Wisconsin, including the Atmospheric Radiation Measurement (ARM)/Cloud and Radiation Testbed (CART) site.

GTE CD-ROM

This CD-ROM contains data from the Global Tropospheric Experiment (GTE) PEM-Tropics B field campaign that was conducted during March and April 1999. It is a comprehensive investigation of the chemical composition, transport, and chemistry of the atmosphere over the tropical Pacific and adjacent continents.

MISR Imagery CD-ROM

The CD-ROM contains images created from MISR data products. Included are true and false color images, as well as stereo anaglyphs that can be viewed with the accompanying blue-red 3-D glasses.

Tools

misr_view

This freely available IDL-based display and analysis tool can be used with MISR and AirMISR data. The latest release has the ability to reproject data into any IDL-supported map projections, transform data using mathematical functions, overlay wind vectors, and display single parameters in color.

NSIDC DAAC

National Snow and Ice Data Center

http://nsidc.org

Snow and Ice, Cryosphere and Climate

Data

PARCA Data Sets

The Program for Arctic Regional Climate Assessment (PARCA) began in 1993 with the goal of measuring and understanding the mass balance of the Greenland Ice Sheet. Approximately 25 investigators used in situ measurements and satellite and aircraft remote sensing for this project. Data are available through the PARCA gateway at http://nsidc.org/data/parca/.

MODIS Products

NSIDC's MODIS snow cover products include Level 2 swath data and Level 3 gridded daily and 8-day composites at 500-m resolution. MODIS sea ice extent products include Level 2 swath data and Level 3 gridded day and night composites at 1-km resolution. See the Web site at http://nsidc.org/daac/modis/.

AVHRR Data at NSIDC

NSIDC's AVHRR products are described on the Web at http://nsidc.org/data/avhrr/. Highlights include AVHRR Polar Pathfinder Twice Daily EASE-Grid Composites, available in 5-km and 1.25-km grids for both the Northern and Southern Hemispheres, and data and information about research using AVHRR Level 1b data to monitor the Antarctic ice shelves.

Tools

Geological Interface for Subsetting, Mapping, and Ordering (GISMO)

The NSIDC DAAC has developed GISMO, a Web-based search-and-order tool. Users can search, subset, and order AVHRR, Scanning Multichannel Microwave Radiometer (SMMR), and TIROS Operational Vertical Sounder (TOVS) EASE-Grid products using this tool. Data may be queried by spatial range, temporal range, and data-specific parameters, and are delivered by FTP or on 8-mm tape. The GISMO tool is located at http://nsidc.org/data/gismo/.

ORNL DAAC

Oak Ridge National Laboratory

http://www.daac.ornl.gov

Biogeochemical Dynamics, Terrestrial Ecology

Flux Data

The ORNL DAAC offers more than 100 years of gap-filled flux and meteorology data for 14 European sites and 17 sites in North and South America; see http://public.ornl.gov/fluxnet/gapzips.cfm. Measurements of fluxes of carbon dioxide, water vapor, and energy exchange at representative sites in Europe are available. Access Excel files for 13 EUROFLUX sites at ftp://daac.ornl.gov/data/fluxnet/euroflux/. For a "snapshot" of data as it existed on June 19, 2000, see http://www.daac.ornl.gov/FLUXNET/euro_db.html. To learn more about flux data, visit the FLUXNET home page at http://www.daac.ornl.gov/FLUXNET/fluxnet.html.

Large-Scale Biosphere Atmosphere Experiment in Amazonia (LBA)

A CD-ROM set entitled *JERS-1 SAR Global Rain Forest Mapping Project: South America (Amazon Basin), 1995-1996, Vol. AM-1* has been released. The set contains data from an international project mapping the world's rainforest regions to high resolution by using SAR. The project was led by Japan's NASDA.

Net Primary Productivity (NPP)

Several additional global NPP data products are now available: gridded NPP data in half-degree cells from the University of Maryland, NPP estimates from the Global Primary Production Data Initiative (GPPDI), model driver and validation data compiled for the Ecosystem Model-Data Intercomparison (EMDI) workshops, and NPP data produced under the auspices of the National Center for Ecological Analysis and Synthesis (NCEAS).

SAFARI 2000

Volume 1 of the SAFARI 2000 CD-ROM series is available. It contains selected recent and historical data from the Southern African Regional Science Initiative, which was conducted during 1999–2001 to study the Earth-atmosphere-human system in southern Africa. The CDs include in situ atmospheric and meteorological measurements, historical biogeochemical and biophysical data, and remote-sensing images from AVHRR and SeaWiFS sensors.

Vegetation Leaf Area Index (LAI)

A global data set containing approximately 1000 estimates of LAI for a variety of biomes and land cover types has been released. The data set contains previously published estimates of LAI for more than 450 field sites worldwide, with the earliest values from 1932. A bibliography of 300+ data sources is also available.

Prototype Validation Exercise (PROVE)

Land and atmospheric measurements for validating EOS satellite data are available. PROVE measurements collected May 1997 near Las Cruces, NM, include surface reflectance, surface temperature, albedo, and leaf area index.

SEDAC

Socioeconomic Data and Applications Center

http://sedac.ciesin.columbia.edu

Human Interactions in the Environment

Data

Crop Yield/Climate Database

SEDAC is pleased to announce the release of a new interactive Web site on "Potential Impacts of Climate Change on World Food Supply: Data Sets from a Major Crop Modeling Study." This site provides access to data developed by Cynthia Rosenzweig and Ana Iglesias of the NASA Goddard Institute for Space Studies (GISS) on projected crop yield changes for major world regions based on climate model estimates, increased atmospheric carbon dioxide concentrations, and alternative adaptation scenarios. The interactive query interface permits users to view the projections of crop yield changes by country or region, climate model scenario, or commodity type. Extensive information is provided online on the study's methodology, inputs, and limitations, and on related links. See http://sedac.ciesin.columbia.edu/giss_crop_study/index.html.

LandScan 2000

The LandScan 2000 data set is a worldwide population database compiled on a 30-arc-second latitude/longitude grid. Census counts (mainly at subnational level) were apportioned to each grid cell based on probability coefficients,which are based on proximity to roads, slope, land cover, and nighttime lights. LandScan 2000 was developed as part of the ORNL's Global Population Project for estimating ambient populations at risk. LandScan files are available from SEDAC in Band Interleaved by Line (BIL) format by continent and in ESRI-grid format for the world. Access the data files (after user registration) through the data links. See http://sedac.ciesin.columbia.edu/plue/gpw/landscan/.

Online Services

2001 Environmental Sustainability Index (ESI)

The ESI is a measure of overall progress towards environmental sustainability, developed for 122 countries. The scores are based on a set of 22 core "indicators," each of which combines 2 to 6 variables for a total of 67 underlying variables. The ESI permits cross-national comparisons of environmental progress in a systematic and quantitative fashion. It represents a first step toward a more analytically driven approach to environmental decision making. The documents available on the Web provide in-depth details on the analytical framework, quantitative methodology, and data sources that underlie the ESI. See http://www.ciesin.columbia.edu/indicators/ESI/.